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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,609	07/22/2003	Satoshi Seo	12732-087002	5062
26171	7590	03/22/2004	EXAMINER	
FISH & RICHARDSON P.C. 1425 K STREET, N.W. 11TH FLOOR WASHINGTON, DC 20005-3500			THOMPSON, CAMIE S	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/623,609	Applicant(s) SEO ET AL.	
	Examiner Camie S Thompson	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 129-176 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 129-176 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: . |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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3. Claims 129-176 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al., U.S. Patent Number 6,372,154.

Li discloses an organic electroluminescent element for use in an organic light-emitting device. The reference discloses in column 4, lines 36-68 optoelectronic thin film devices that may be light emitting devices such as a thin film transistor and an electrochemical luminescent display device as per instant claims 141, 144, 149, 152, 157, 160, 165 and 168. Figure 1 of the reference discloses the structure of the light-emitting device as having a substrate/anode/hole transporting layer/electron transporting layer/cathode structure as per instant claims 129-136. Li discloses that the hole transporting layer can have a combination of organic compounds such as aromatic amines, carbazoles, copper phthalocyanine and polythiophene derivatives as per the instant claims (see column 2, lines 63-68). Additionally, the electron-transporting layer can have a combination of organic compounds such as aromatic oxadiazoles, triazoles and quinolines as per the instant claims (see column 2, lines 60-63). The combination of organic compounds in the electron and hole transporting layers provides for a mixed region within the device. Li also discloses that a dopant is used in the hole-transporting layer for excited energy state transfer (see column 4, line 29 and column 13, lines 1-13). The reference also discloses in column 13, lines 11-24 that the thickness of the hole-transporting layer and the luminescent layer range 0.5 to 500 nm and 10 nm to 300 nm respectively. Figure 2 of the reference discloses that a luminescent layer can be directly printed on the anode substrate (also see column 13, lines 14-16). Column 6, lines 50-68 of the reference disclose the organic polymers used in the luminescent layer, which also functions as the electron-transporting layer of the device. Also, Li discloses that in order to

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obtain highly efficient light-emitting devices, phosphor dopants can be added in order to promote luminescence from a triplet state (see column 12, lines 11-30).

4. Claims 129-138, 141, 144-146, 149, 152-154, 157, 160-162, 165 and 168-176 are rejected under 35 U.S.C. 102(e) as being anticipated by Kwong et al., U.S. Pre Grant Publication 2002/0074935.

Kwong discloses an organic light-emitting device that can be used in computer displays, television monitors, light sources and cellular phones as per the instant claims (see column 1, paragraphs 0001-0002). Additionally, the reference discloses that the light-emitting device comprises a substrate; an anode; a hole injecting layer over the anode layer; a mixed layer over the hole injecting layer; the mixed layer comprising a hole transporting material and an electron transporting material and being doped with a phosphorescent material; and a cathode layer over the phosphorescent doped mixed layer. Reference claim 5 discloses that the hole transporting material can be N,N'-diphenyl-N,N'-bis- α -naphthylbenzidine as per the instant claims. Also, the Kwong reference discloses that the dopant material is an organic compound such as bis(2-(2'-benzo[4,5-a]thienyl)pyridinato-N,C³) iridium (III)acetylacetonate as per instant claims 169-176 (see Example 2). Paragraph 0011 of the reference discloses that the mixed layer in the device serves as the emission layer, wherein the hole transporting material and the electron transporting material in the mixed layer acts as a host material for the phosphorescent dopant as per the instant claims.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If

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attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (571) 272-1526. The fax phone number for the Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CYNTHIA H. KELLY
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER 1700

